

stainproofing agent concerning test 6 respectively;

FIGS. 7A and 7B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 7 respectively;

5 FIGS. 8A and 8B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 8 respectively;

FIGS. 9A and 9B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the  
10 stainproofing agent concerning test 9 respectively;

FIGS. 10A and 10B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 10 respectively;

FIGS. 11A and 11B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 11 respectively;

FIGS. 12A and 12B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 12 respectively;

20 FIGS. 13A and 13B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 13 respectively;

FIGS. 14A and 14B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the  
25 stainproofing agent concerning test 14 respectively;

FIGS. 15A and 15B show a chemical formula of a stainproofing agent and a schematic structure of a layer comprising the stainproofing agent concerning test 15 respectively;

FIG. 16 is a sectional view of a western style flush toilet of a first embodiment in accordance with the present invention;

FIG. 17 is a sectional view of a Japanese style flush toilet of a second embodiment in accordance with the invention;

5 FIG. 18 is a perspective view of a flush toilet for men of a third embodiment in accordance with the invention;

FIG. 19 is a partially broken plan view of the flush toilet for men of the third embodiment;

10 FIG. 20 is a plan view of a lavatory with a washbasin of a fourth embodiment in accordance with the invention;

FIG. 21 is a front view of the lavatory with the washbasin of the fourth embodiment; and

15 FIG. 22 is a graph showing the relationship between the number of times of wear and a contact angle of water concerning a fifth embodiment and comparison 1.

#### BEST MODE FOR ENFORCEMENT OF THE INVENTION

#### TEST EXAMPLES AND EVALUATION

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Test examples 1 to 15 and their evaluation will first be described.

##### Test example 1:

A ceramic product which is used with water and has a glazed 25 layer on a surface thereof is first prepared. The ceramic product is, for example, a flush toilet or basin. A treated surface of the ceramic product such as an inner surface thereof is cleaned with ethanol.

Further, a mixture of first and second agents mixed at a weight ratio ranging between 1:1 and 5:1 is prepared as a stain resistant agent. The weight ratio is selected depending upon the first and second agents.

Concerning the first agent,  $C_8F_{17}CH_2CH_2Si(OCH_3)_3$  is prepared as an organic silicon compound containing a perfluoloalkyl group and  $Si(CH_3O)_3CH_2CH_2-(Si(CH_3)_2O)_{10}-Si(CH_3)_2CH_2CH_2Si(OCH_3)_3$  is prepared as a methylpolysiloxane compound containing a hydrolytic group. The first agent is a co-hydrolysate of them in a hydrophilic solvent containing a solution of 0.1N-hydrochloric acid, t-butanol and hexane. As a result, each of  $C_8F_{17}CH_2CH_2Si(OCH_3)_3$  and  $Si(CH_3O)_3CH_2CH_2-(Si(CH_3)_2O)_{10}-Si(CH_3)_2CH_2CH_2Si(OCH_3)_3$  is considered to contain a silanol (Si-OH) group.

On the other hand, the second agent is a mixture of organopolysiloxane  $(HO-(Si(CH_3)_2O)_{30}-Si(CH_3)_2OH)$  and methanesulfonic acid as a strong acid.

When these first and second agents are mixed together, the silanol group as the co-hydrolysate reacts on organopolysiloxane and the strong acid so as to result in a siloxane combination ( $Si-O-Si$ ) due to dehydration, whereby the silanol group is considered to become an addition compound in which a plurality of molecules are twined complicatedly. Accordingly, the stain resistant agent containing the mixture of the first and second agents is not composed of a single molecule of an organic silicon compound containing a perfluoloalkyl group, a methylpolysiloxane compound containing a hydrolytic group, organopolysiloxane, etc. but is considered to be composed into an addition compound in which a plurality of these molecules are twined complicatedly